

Remarks

Applicants have carefully reviewed and considered the Office Action mailed on March 15, 2004 and the Advisory Action mailed on July 23, 2004. Claims 1-62, 80, 109-110, 113-116 and 122-129 have been canceled, claims 63, 64, 66, 67, and 81, have been amended; as a result, claims 63-79, 81-108, 111-112, and 117-121, are now pending in this application. The amendments to the claims are to clarify the subject matter the applicants regard as their invention. No new subject matter is added.

Rejections under 35 U.S.C. §112

1. Claims 63-79, 81-103, 117-121 and 125-129 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has objected to the claim 63 as allegedly unclear. This rejection is respectfully traversed.

2. As amended, claim 63 requires that the soft segment is a specific macrodiamine having formula (I) where n is an integer from 5 to 100 and a macrodiol. In contrast, the hard segment is formed from a diisocyanate and diamine compound of formula (I), where n is an integer from 1 to 4. Thus, the hard segment is different from the soft segment. Although the formula (I) compounds in both segments have the same general formula, they have different structures due to the number of repeating silyl groups. Thus, the hard and soft segments are different and have different properties. The examiner noted that the soft segments are derived from high molecular weight monomeric or oligomeric chains and the hard segments derived from low molecular weight momomers. Here, Applicants note that the soft segment is derived from the compound of formula (I) where n is from 5 to 100 and a macrodiol. The hard segment is derived from a compound of formula (I) where n is from 1 to 4 and a diisocyanate. Thus, it is respectfully submitted that the hard and soft segments are distinguish by name (hard v. soft), and by the polymer composition.

3. Claims 81-102 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner objected to the use of the term “about” in regard to the variable “n” in the formulas. This rejection is respectfully traversed.

The term “about” has been cancelled in the claims when referring to the variable “n” in the formulas. This amendment is made to clarify the subject matter that applicants regard as their invention. It is respectfully submitted that this amendment does not narrow the scope of the claims.

4. Claims 125-129 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is respectfully traversed.

5. The applicants disagree with the Examiner. However, in order to expedite the allowance of the instant claims, the rejected claims, 125-129 have been cancelled. Applicants reserve the right to present the cancelled claims in a continuation application.

Accordingly it is respectfully requested that the rejections under 35 U.S.C. § 112 be withdrawn

Rejection under 35 U.S.C. §103

6. Claims 63-79, 81-108, 111, 112, 117-121 and 125-129 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Szycher et al. U.S. 5,863,627 (Szycher '627) or WO 98/13405 or JP 4-248826, each in view of Li et al. U.S. 5,221,724 (Li '724) and Ohtaki et al. U.S. 5,861,085 (Ohtaki '085). This rejection is respectfully traversed.

In a prior Office Action, The Examiner conceded that the primary documents (Szycher '627, WO 98/13405, and JP 4-248826) do “[not] disclose the specific use of an amine functional siloxane

as a chain extender” (Official Action, mailed on 11/2/02, page 6) as in the present invention. In the present Office Action (mailed March 15, 2004) the examiner again admits this. (See page 5, paragraph 7.) The Examiner also asserted that Li ‘724 discloses the use of amine functional siloxane compounds that overlap the applicants compounds.

In regard to claims 63-79, and 81-103, it is respectfully submitted that none of the primary documents (Szycher ‘627, WO 98/13405, or JP 4-248826; each in view of Li ‘724 and Ohtaki ‘085), alone or in combination, disclose or suggest all of the elements of the presently claimed invention. Specifically, none of these documents disclose or suggest the use of a diamine functional siloxane having formula (I) where n is an integer from 5 to 100, in the soft segment and a diamine functional siloxane compound of formula (I), where n is an integer from 1 to 4, in the hard segment compound of formula (I) as a chain extender in the hard segment, as in compositions claimed in the present claims. Additionally, none of these documents disclose or suggest polyurethane-urea compositions where the soft segment contains a silicone containing macrodiamine and macrodiol compound of formula (I) and a silicone containing diamine in the hard segment as in the present invention. Thus, because none of these documents, alone or in combination, provide all of the elements of the claimed invention they cannot provide the motivation to combine or provide any reasonable expectation of success in arriving at the present invention.

9. In the Office Action mailed on March 15, 2004, the Examiner stated that the argument regarding the hard and soft segments was flawed because of the overlap in the claims of the functional siloxane compounds. It is respectfully submitted that the hard and soft segments of the composition claimed can be distinguished from each other that the arguments for non-obviousness from the previous amendment are proper. Further, it is submitted that, none of the cited documents disclose or suggest the claimed polyurethane-urea compositions where the soft segment contains diamine functional siloxane having formula (I) where n is an integer from 5 to 100, and the hard segment contains a diamine functional siloxane compound of formula (I), where n is an integer from 1 to 4, as in compositions claimed in the present claims.

In regards to claims 104-108, 111 and 112, it is respectfully submitted that none of the primary documents (Szycher '627, WO 98/13405, or JP 4-248826; each in view of Li '724 and Ohtaki '085), alone or in combination, disclose or suggest all of the elements of the presently claimed invention. Specifically, none of these documents disclose or suggest polyurethane-urea compositions where the hard segment contains a diamine functional siloxane compounds of formula (I), where n is an integer from 1 to 4, as a chain extender in the hard segment. Thus, because none of these documents, alone or in combination, provide all of the elements of the claimed invention they cannot provide the motivation to combine or provide any reasonable expectation of success in arriving at the present invention.

Thus, it is respectfully submitted that the claimed invention is not obvious over the cited documents in an combination. Accordingly, Applicant respectfully request withdrawal of the rejection of the present claims under 35 U.S.C. § 103(a).

Conclusion

Applicant respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney ((612) 373-6968) to facilitate prosecution of this application.

AMENDMENT AND RESPONSE Under 37 C.F.R. 1.116

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Title: SILOXANE-CONTAINING POLYURETHANE-UREA COMPOSITIONS

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If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 16th day of August, 2004.

PATRICIA A. HULTMAN

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Signature